NOTE

FROM: Kathryn Sargeant
U.S. Environmental Protection Agency
Office of Mobile Sources

TO: Conformity Stakeholders

SUBJECT: New Staff Paper for Transportation Conformity in Transitional Ozone Areas

DATE: July 28, 1998

In February 1998, EPA and DOT issued a staff paper to explain our current thinking on the proposal for transportation conformity in transitional areas. Since then, our proposal has evolved in part based on the feedback we received from conformity stakeholders. This paper describes the approach that EPA and DOT have agreed to propose in the Federal Register, expected to be published in December 1998.

Though this paper is organized somewhat differently than the February 26, 1998 staff paper, the two-tiered structure of the conformity test remains the same. The primary difference in our proposal is the consequences of failing to show conformity in the outyears. Instead of creating a list of control measures and making an enforceable commitment to prepare a maintenance plan, areas that cannot show conformity in the outyears will be given three years to remedy that situation.

The attached document includes, in addition to the staff paper, a side-by-side comparison table of the August 1997 conformity rule and the preliminary proposal and background on the transitional classification. This package will be available on EPA's conformity website (http://www.epa.gov/OMSWWW/transp/traqconf.htm) by July 29, 1998.

July 28, 1998

Conformity in Transitional Ozone Nonattainment and Maintenance Areas

I. Nonattainment and Maintenance Areas -- Metropolitan and Rural

Nonattainment Areas

Attainment SIPs in these areas will be required to explicitly identify a VOC and NOx motor vehicle emissions budget for the **attainment year**[1] (i.e., a level of motor vehicle emissions which, when considered with all other emissions sources in the attainment year, allows the area to demonstrate attainment). The attainment SIPs will also be required to identify the amount of VMT in the attainment year that was used to establish the motor vehicle emissions budget.

Maintenance Areas[2]

Maintenance plans for transitional areas will also be required to explicitly identify a VOC and NOx motor vehicle emissions budget for the **last year of the maintenance plan**. The maintenance plan will also be required to identify the amount of VMT in the last year of the maintenance plan that was used to establish the motor vehicle emissions budget.

Demonstrating Conformity

Note: The description here applies to nonattainment areas. Adapting the description for maintenance areas can be done by substituting all references to the **"attainment year"** with the equivalent for maintenance areas, the **"last year of the maintenance plan."** (This substitution was not made in the text in an effort to avoid repetition and maintain readability.)

Plans and TIPs conform if one of two tests, the VMT screen or the emissions test, is met. An area conforms if it passes the VMT screen. If an area does not pass the VMT screen, it must pass the emissions test. An area could choose to skip the VMT screen altogether and do only the emissions test.

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[1] For the purposes of this paper, the phrase "attainment year," will mean the year for which the attainment SIP establishes a budget. In some cases, this year will be the actual attainment year. In other cases, the attainment SIP's inventory (from which the budget is derived) may be for a year other than the attainment deadline. Further description will be found in the actual proposal as well as guidance that the EPA will distribute.

[2] This section refers to transitional areas that eventually attain and develop a maintenance plan under the 8-hour standard, not current areas with maintenance plans (under the 1-hour standard).

Areas that cannot pass the emissions test for the outyears have three years to fix the problem, or they will lapse.

These basic features are expanded on below, organized by years for which areas must demonstrate conformity.

A. Areas Must Show Conformity for the Attainment Year:

(1) VMT screen. VMT projections for the attainment year (based on the most recent planning assumptions and the proposed plan and TIP) are less than or equal to the SIP's VMT projection.

(2) Emissions test. If an area cannot pass the VMT screen for the attainment year, then it must run an emissions test for (a) the attainment year, and (b) the tenth year of the transportation plan.

(a) As in the existing conformity rule, emissions projections for the transportation plan/TIP for the attainment year must be less than or equal to the SIP budget for the attainment year, or the plan/TIP does not conform.

(b) Emissions projections for the tenth year of the proposed transportation plan must also meet the SIP budget for the attainment year. If emissions projections are greater than the budget, a three-year clock begins. During the three years, the area conforms and projects can be approved. However, if the three-year clock expires and the area has still not demonstrated that the budget can be met, the plan and TIP will lapse.

Rural areas:

As in the August 1997 conformity rule, rural areas are allowed to choose among several tests for demonstrating conformity for the tenth year of the plan (again, only necessary if the area fails the VMT screen for the attainment year):

- meeting the SIP budget for the attainment year, (as described above);
- the build/no-build test;
- "less-than-some-baseline-year" emissions test, where the area's conformity SIP would name what baseline year is to be used; or
- air quality modeling to demonstrate that violations would not occur.

As described above, if one of these tests cannot be met, the area has three years in which to remedy the situation. Either the transportation plan or TIP, or the SIP's motor vehicle emissions budget must be revised within three years, or the plan and TIP will lapse.

B. Areas Must Show Conformity for the Last Year of the Plan:

(1) VMT screen. By the last year of the transportation plan, VMT is projected to have grown only as much as emission factors are expected to decline, so that there is no net increase in motor vehicle emissions after the attainment year. This is demonstrated if the VMT projected for the last year of the transportation plan is less than or equal to the SIP's VMT projection for the attainment year adjusted by the ratio of emissions factors. This sentence is represented by the equation below.

$VMT_{last\ yr}$	=	VMT projected for the last year of the transportation plan
$SIP\ VMT_{att\ yr}$	=	SIP VMT projection for attainment year
$EF_{att\ yr}$	=	emission factor for the attainment year [3]
$EF_{last\ yr}$	=	emission factor for the last year of the transportation plan

$$\mathbf{VMT}_{\mathbf{last\ yr}} \leq \mathbf{SIP\ VMT}_{\mathbf{att\ yr}} \times \frac{\mathbf{EF}_{\mathbf{att\ yr}}}{\mathbf{EF}_{\mathbf{last\ yr}}}$$

Areas would need to compute the ratio of emission factors ($EF_{att\ yr}$ / $EF_{last\ yr}$) for both VOC and NOx, and then use in the above equation whichever ratio was smaller.

(2) Emissions test. If an area cannot pass the VMT screen for the last year of the plan, then it must run the emissions test for (a) the tenth year of the transportation plan, and (b) the last year of the transportation plan.

(a) Emissions projections for the tenth year of the proposed transportation plan must be less than or equal to the SIP budget for the attainment year. If emissions projections are greater than the budget, a three-year clock begins. During the three years, the area conforms and projects can be approved. However, if the three-year clock expires and the area has still not demonstrated that the budget can be met, the plan and TIP will lapse.

(b) Emissions projections for the last year of the proposed transportation plan must also meet the SIP budget for the attainment year. If emissions projections are greater than the budget, a three-year clock begins. During the three years, the area conforms and projects can be approved. However, if the three-year clock expires and the area has still not demonstrated that the budget can be met, the plan and TIP will lapse.

[3] Emission factors would be the average daily areawide emission factor based on the area's distribution of VMT among four functional classes.

Rural areas:

As in the August 1997 conformity rule, rural areas are allowed to choose among several tests for demonstrating conformity for the tenth year and last year of the plan:

- meeting the SIP budget for the attainment year, (as described above);
- the build/no-build test;
- "less-than-some-baseline-year" test, where the area's conformity SIP would name what baseline year is to be used; or
- air quality modeling (as used in the SIP itself).

As described above, if one of these tests cannot be met, the area has three years in which to remedy the situation. Either the transportation plan or TIP, or the SIP's motor vehicle emissions budget must be revised within three years, or the plan and TIP will lapse.

Why is a conformity determination necessary for the tenth year of the plan in some cases?

If an area can pass the VMT screen for both the attainment year and the last year of the plan, then EPA believes it is not necessary to examine any year in between (e.g., the tenth year). However, if an area meets the VMT screen for only one of these two analysis years, there is some concern about conformity during the interim. Therefore, in addition to doing the emissions test for the year that it failed the VMT screen, the area must also do the emissions test for the tenth year of the plan. (The area can omit the emissions test for the year that it passed the VMT screen.)

How is VMT and/or emissions projected in the conformity determination?

The latest planning assumptions and the latest emissions model must be used.

In general, HPMS VMT estimates shall serve as the base year VMT from which projections are made.

Areas with transportation network demand models must use them to project VMT.

Areas without network models may project VMT using any appropriate methods that account for VMT growth by, for example, extrapolating historical VMT or projecting future VMT by considering growth in population and historical growth trends for VMT per person. These methods must also consider future economic activity, transit alternatives, and transportation system policies.

Where emissions estimates are required for the attainment year, the tenth year of the transportation plan, and the last year of the transportation plan (e.g., the area failed the VMT screen for both the attainment year and the last year of the transportation plan), network model runs are only required for the first and last analysis year. Emissions for the tenth year of the transportation plan can be interpolated.

New projections are not required if the consulting agencies agree that there have been no significant changes in project mix, timing, and design concept/scope since the last conformity determination.

Who determines conformity?
The MPO and U.S. DOT. The MPO may delegate analysis responsibilities to the state DOT; such division of responsibilities is documented in the conformity SIP.

When is transportation plan/TIP conformity required?
Before adoption or approval of any new transportation plan, TIP, or plan/TIP amendment.

When does transitional conformity start applying?
Transitional conformity begins applying as soon as an area is designated nonattainment and classified transitional. The federal conformity rule will apply until transitional conformity SIPs are approved.

Frequency, project-level requirements, timely implementation of TCMs, consultation, public participation, non-federal project requirements, exempt project list remain basically the same as in the current conformity process.

Side-by-Side Comparison of Traditional and Transitional Conformity in Metropolitan Areas

Traditional Conformity Rule (8/97)	**Intended Transitional Proposal**
Regional Tests for Plans and TIPs	**Regional Tests for Plans and TIPs**
No comparable option.	Optional VMT screen allows conformity to be determined without emissions analysis.
In areas with attainment demonstrations but no submitted maintenance plan...	**In areas with attainment demonstrations but no submitted maintenance plan...**
Emissions predicted for attainment year must be less than SIP's attainment year budget.	Same.
Emissions predicted for last year of transportation plan must be less than SIP's attainment year budget.	Emissions can be predicted to exceed the attainment budget, which would begin a three year clock. At the end of three years, the area lapses if it cannot show conformity.
Emissions predicted for an intermediate analysis year must be less than SIP's attainment year budget.	Intermediate analysis year only necessary if cannot pass both years of VMT screen. Emissions in the tenth year of the transportation plan can be predicted to exceed the attainment budget, which would begin a three year clock. At the end of three years, the area lapses if it cannot show conformity.
In areas with submitted or approved maintenance plans...	**In areas with submitted or approved maintenance plans...**
Emissions predicted for the last year of the maintenance plan must be less than the maintenance plan's budget for that year.	Same.
Emissions predicted for the last year of the transportation plan must be less than the budget for the last year of the maintenance plan.	Emissions can be predicted to exceed the maintenance budget, which would begin a three year clock. At the end of three years, the area lapses if it cannot show conformity.

Traditional Conformity Rule (8/97)	Intended Transitional Proposal
Emissions predicted for an intermediate analysis year must be less than the budget for the last year of the maintenance plan.	Intermediate analysis year only necessary if cannot pass both years of VMT screen. Emissions in the tenth year of the transportation plan can be predicted to exceed the attainment budget, which would begin a three year clock. At the end of three years, the area lapses if it cannot show conformity.
Regional Analysis Requirements	**Regional Analysis Requirements**
Network models are required in serious and above ozone areas with urbanized population over 200,000, and in other areas where they are available.	Network models must be used in areas that have them.
Network model analysis must be run for the attainment year, last year of transportation plan, and intermediate years such that analysis years are no more than 10 years apart.	Network model analysis must be run for first and last analysis years only; intermediate years can be interpolated.
Latest planning assumptions and most recent emissions model.	Same.
Project-level Requirements	**Project-level Requirements**
FHWA/FTA projects must come from a currently conforming plan and TIP.	Same.
Hot-spot requirements in CO and PM-10 areas.	No hot-spot requirements because rule covers only ozone areas.
Timely Implementation of TCMs	**Timely Implementation of TCMs**
SIP TCMs must be implemented according to the SIP schedule.	Same.
Responsibility for Determining Conformity	**Responsibility for Determining Conformity**
MPO and U.S. DOT determine conformity. State DOT can help perform analysis.	Same.
Frequency and Timing of Conformity	**Frequency and Timing of Conformity**

Traditional Conformity Rule (8/97)	**Intended Transitional Proposal**
Conformity is required before plans, TIPs, and projects are approved; at least every three years; and within 18 months of certain SIP events.	Same.
Interagency consultation, public participation, non-federal projects, exempt projects	Same.

Background on Transitional Ozone Areas

The July 16, 1997 White House memorandum on implementing the revised ozone and particulate matter standards directs EPA to develop a less burdensome transportation conformity rule for new ozone nonattainment areas classified as "transitional."

The transitional classification is a new classification for areas that are attaining the 1-hour ozone standard, but not the 8-hour standard, by the year 2000. These areas may be classified as "transitional" ozone nonattainment areas if they meet certain requirements.

In the eastern United States, most new ozone nonattainment areas are expected to attain the new 8-hour standard solely by implementing control measures to comply with EPA's rule for regional nitrogen oxide (NOx) reductions. These areas are eligible to be classified as transitional if, by 2000, they (1) are meeting the 1-hour ozone standard, and (2) submit attainment plans that include control measures to achieve the required regional NOx reductions, and, for the very few areas that may need them, (3) submit any additional local control measures needed for attainment of the 8-hour standard. The attainment plan submittal date of 2000 for transitional areas is 3 years earlier than is otherwise required for areas not meeting the 8-hour standard. Areas that are not subject to requirements for regional NOx reductions are also eligible to be classified as transitional if they (1) are meeting the 1-hour ozone standard by the year 2000, (2) by 2000 submit plans containing local control measures that will result in attainment of the 8-hour standard, and (3) provide for the implementation of these measures on the same time schedule as the regional transport reductions.

EPA will be designating nonattainment areas under the 8-hour standard in 2000, and areas would be classified as transitional at that time, if they are eligible.